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Quince Growing

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QUINCE GROWING

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Introduction

The quince, though grown since ancient times, has never attained large economic importance in the United States in comparison with many other fruits. It is widely distributed but occurs mostly in gardens and dooryards, though in a few States there are orchards of commercial importance. The status of the quince in the fruit industry has changed but little in many years.

The selling price of the fruit is often high, but it does not follow necessarily that its culture is correspondingly profitable. The yields are frequently small, diseases and insects are prevalent, and their control is often difficult; besides, the uses of the fruit are limited mostly to the making of jelly, marmalade, preserves, and a few other similar products, also for adding flavor and piquancy to apples and pears when stewed or baked. Because of restricted use of the quince, as with most other fruits utilized in only a small number of ways, demands for it are easily supplied and overstocking of the market would be easy to accomplish.

Habit of Growth

The quince tree, or bush, does not make a large growth; it attains, as a rule, a height of not more than 15 feet. Unlike those of most other deciduous fruit trees, the fruit buds of the quince are not formed the preceding season, but they develop at the terminal ends of new twigs which grow early in the spring of the current season. The fact that such twigs do not elongate more after the fruit buds form accounts, in part at least, for the restricted and slow growth of the tree. It also accounts for the characteristic crooked growth made by the branches.

When well grown, most varieties of quince begin to bear at about 3 or 4 years of age, and reach full bearing when about 10 years old. A yield of 1 bushel of fruit to the tree when in full bearing is considered a good average.

Soils

Quinces are grown on a wide range of soil types. An invariable requirement, whatever the type, is that the soil be well drained. Probably a clay loam, fairly fertile, and moderately retentive of moisture but having good drainage is to be preferred. The claim is made that when the tree is planted on light soils its growth is relatively rapid, other things being equal, as compared to the development on heavier soils. However, it is relatively short-lived and is usually less productive than on heavier soils. In general, good corn or potato land may be considered suitable for quinces.

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Trees for Planting

The trees grow rather slowly in the nursery, as they do after they are planted in the orchard or garden. Quite commonly, therefore, on account of their size, 3-year-old trees are desired for planting. Some growers, however, prefer 2-year-old trees, and others who want to grow them in bush rather than in tree form may want 1-year-old trees. The latter trees are branched but little, or not at all, and can be headed back readily to a height of 10 to 12 inches to induce branching close to the ground.

Planting the Trees

The soil should be thoroughly prepared by deep plowing and thorough pulverizing. The details of planting quince trees do not differ from those of planting other kinds of fruit trees. The broken roots should be trimmed off and the top shaped with a view to its future development. Several well-placed branches should be selected to form the permanent top, and the others, if there is a surplus, removed. For shaping the tops of most kinds of fruit trees, three to five branches should be selected, but in the case of the quince, because of its habit of growth, a somewhat larger number may be retained. The branches that remain may be headed back slightly, as is usually done in planting other kinds of fruit trees, but it is probably of less importance in case of the quince because of its slower growth. Where a bush is desired, rather than a tree, the top should be cut back to a height of 10 to 12 inches when it is planted. The trees should be planted about 15 feet apart each way, or about 190 trees to an acre

Care of the Trees

Very little experimental work has been done on quince culture but the following comments appear to be warranted: Because of their naturally slow growth, the maintenance of favorable growing conditions is especially desirable, and yet growth should not be forced unduly because of the susceptibility of the quince to fire blight. Probably clean tillage from early spring to midseason, with the use of stable manure or green-manure crops to maintain the humus content of the soil, would give good results. This treatment, however, should usually be supplemented with commercial fertilizers. The effects of fertilizers on other fruit trees growing under similar conditions would be suggestive as to their use on quince trees.

Under some conditions mulching the trees with straw or other herbage or growing them in sod would probably prove satisfactory, at least after the trees reach bearing age, if supplemented with a proper use of fertilizers. Fruit trees growing in sod generally require liberal applications of nitrogen.

In sections where severely low winter temperatures may be expected and where the ground is often not well protected by a blanket of snow, a cover crop to protect the roots from injury by extreme temperatures may be advisable, especially if the trees have been given clean tillage during the early part of the season.

Pruning

Because of the habit of growth and fruiting, as previously pointed out, the quince tree makes a rather slow, crooked, angular growth of limb. Comparatively little pruning is needed. Deadwood, as it occurs, should be removed, as should branches that crowd or interfere unduly with one another. Furthermore, new growth must be developed each season to insure fruitfulness. It has already been pointed out that each fruit is borne at the terminal end of a twig of the current season's growth. This means obviously, that a tree, which develops only a few new twigs with the renewal of growth in the spring, has the potential possibility of producing only a correspondingly small number of fruits. Enough cutting back of the old growth is therefore necessary each year to stimulate the development of a goodly number of new side branches and twigs the following season. Such new growth represents potentially the current crop of fruit, though not every new twig will develop a fruit bud at its terminal end. The removal of a few older branches is necessary sometimes, in order to thin out the top of a bush or tree and admit sunlight. Pruning is done for the most part during the dormant season.

Diseases and Insects

The quince is subject to various disease and insect troubles that are often serious; most of these, however, occur also on other fruits. For instance, fire blight and leaf blight (also called, on the quince, black spot and fruit spot) are the same diseases that cause blight of the apple and pear, and leaf blight of the pear, respectively. They are held in check on the quince by the same methods used to control them on the apple and the pear. Other diseases include rust, fruit spot, black rot, bitter rot, and crown gall. All occur on the apple, although quince rust is not identical with apple cedar rust but very similar to it in many ways.

The quince curculio is the most serious insect pest of the fruit in some sections. The oriental fruit moth and roundheaded apple tree borer are also likely to be serious on the quince. The apple tree borer is often more injurious to the quince than to the apple. Certain other insects which commonly attack the apple are likely also to occur on the quince.

It is highly important that leaf blight and other troubles that weaken or destroy the foliage early in the season be controlled. Trees that lose their leaves in midsummer cannot thrive and fruit well.

Quince disease and insect problems should be referred to the specialists at the State agricultural experiment stations, or to the United States Department of Agriculture, for information as to control measures. Specimens of the affected material should accompany letters of inquiry where that is possible.

Varieties

There has been very little change in many years in the varieties of quince commonly cultivated, and only a few varieties are now offered to the trade by American nurserymen.

The Orange variety is grown much more widely and extensively than any other; probably, in fact, more than all other varieties combined. It is one of the earlier ripening sorts, roundish or apple-shaped and a rich orange in color.

The Champion is a larger fruited sort than the Orange and is one of the latest to ripen of the more or less well known sorts. Its shape is obscurely pyriform and its color when mature is a "lively yellow."

The Pineapple variety, grown to some extent in California, is distinct from a very old variety having the same name. The latter appears to have been discarded many years ago. The Pineapple variety now in cultivation is seldom grown in the East.

The Angers is a very strong, vigorous variety with a vigorous root system. It is rarely planted for its fruit, but it is grown as a stock for use in propagating dwarf pear trees as well as a stock on which to bud other varieties of quinces.

The Van Deman, Rea, Meech, and one or two other varieties are listed in nursery catalogs, but the plantings of these varieties are small in comparison with those of the Orange variety.

The so-called Japanese or flowering quince is primarily an ornamental shrub, though the fruit is sometimes used for jelly making.

Propagation

Quince trees are propagated as above implied by "working" on the Angers variety as an understock. Budding is the usual method of propagation employed. Angers stocks are propagated by mound layering and by cuttings. Most varieties may also be multiplied by cuttings, but some sorts do not root readily.

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